THE DETERMINANTS OF EXPORTS FOR SABAH

AZMAN BIN POJI

UMS
UNIVERSITI MALAYSIA SABAH

FACULTY OF BUSINESS, ECONOMICS AND ACCOUNTING
UNIVERSITI MALAYSIA SABAH
2014

THE DETERMINANTS OF EXPORTS FOR SABAH

AZMAN BIN POJI

UMS
UNIVERSITI MALAYSIA SABAH

THESIS SUBMITTED IN FULFILLMENT FOR THE MASTER OF ECONOMICS

FACULTY OF BUSINESS, ECONOMICS AND ACCOUNTING
UNIVERSITI MALAYSIA SABAH
2014

DECLARATION

I hereby declare that the work in this thesis in my own, except for data, equations and references which have been duly acknowledged.

15 August 2014

_____

Azman Poji

PE20108012

UMS
UNIVERSITI MALAYSIA SABAH

CERTIFICATION

Name	:	**AZMAN BIN POJI**
Matric no	:	**PE20108012**
Title	:	**THE DETERMINANTS OF EXPORTS FOR SABAH**
Degree	:	**MASTER OF ECONOMICS (ECONOMICS PLANNING AND DEVELOPEMENT)**
Viva date	:	**05 MAY 2014**

DECLARED BY;

1. MAIN SUPERVISOR

Dr. Caroline Geethe Arokiadasan Signature

UMS
UNIVERSITI MALAYSIA SABAH

ACKNOWLEDGEMENT

In making this thesis complete, I have experienced many challenges and difficulties particularly in time management and data collection. My greatest appreciation goes to my parents Poji bin Omar and Mulusia binti Abd. Munap. To my wife Albiah binti Abdullah thanks for your support and understanding and to my heroes Muhammad Aiman, Muhammad Afiq, Muhammad Azwan and Muhammad Arif you are my inspiration and give me strength to further develop my carrier. Special thanks to Carolyn Annamarie Ariffin and Cherlyn Ameera Rafizy for moral support.

Special thanks also to my supervisor Dr. Caroline Geetha Arokiadasan who gave me constructive guidance and support to make this thesis complete.

My special thanks to my family members who continuously support my career development. Lastly, my special thanks also to people who were directly and indirectly involved in completing this thesis.

UMS
UNIVERSITI MALAYSIA SABAH

Azman Poji
29 August 2014

ABSTRACT

This study aims to identify the determinants of exports for Sabah. The Heckscher–Ohlin Model (H–O model) on international trade highlighted that a country will export products by using their abundant and cheap factors of production and import products which are produced by the countries' scarce factors. This will enable the country to experience economic of scale and reduce the cost of production. Based on H-O model, Sabah that has abundant natural resources should have high export earnings arising from plenty of natural resources such as crude oil, palm oil, timber and sea products. However, export of Sabah is still low in term of its contribution to the national export. Hence, question arises on what are the factors that influence exports of Sabah. The study used annual data from 1980 to 2010. Export of Sabah is a dependent variable, meanwhile independent variables are gross domestic product of Sabah (GDP), foreign direct investment of Sabah (FDI), producer price index (PPI), development expenditures of Sabah (DE) and exchange rate (ER). The analysis began with the Ordinary Least Square (OLS) estimation. When the value of R^2 was high but the value of Durbin Watson (DW) was low, the existence of autocorrelation was confirmed. Thus the analysis was further extended with the Augmented Dickey Fuller (ADF) test to confirm unit root problem. Johansen Cointegration test was used to determine long run relationship between the dependent and independent variables and the number of cointegrating vectors. Meanwhile the Vector Error Correction Model (VECM) was used to determine the short run relationship between export of Sabah and its independent variables. The empirical result of OLS revealed that gross domestic product of Sabah, producer price index and development expenditures of Sabah were significant in explaining the changes in export of Sabah. However, there was no short run relationship between export of Sabah and gross domestic product of Sabah, foreign direct investment of Sabah, producer price index, development expenditures of Sabah and exchange rate. The study found that gross domestic product of Sabah and foreign direct investment of Sabah were statistically significant and have positive relationship with export of Sabah in the long run. However, the producer price index, development expenditures of Sabah and exchange rate were statistically significant but their relationships with export were against to the hypothesis of the study. Increases in the producer price index and the exchange rate had a positive relationship instead of a negative relationship with export meanwhile development expenditures had a negative relationship with export of Sabah instead of a positive relationship. Finally, several recommendations were suggested to increase the export of Sabah.

ABSTRAK

PENENTU EKSPORT UNTUK SABAH

Kajian ini bertujuan untuk mengenal pasti faktor-faktor yang mempengaruhi eksport Sabah. Model Heckscher-Ohlin (H-O Model) berkaitan perdagangan antarabangsa menekankan bahawa sesebuah negara akan mengeksport barang-barang yang menggunakan input yang murah dan banyak dalam pengeluaran dan mengimport barang-barang yang menggunakan input yang terhad dalam pengeluaran. Ini akan membolehkan negara tersebut mengalami ekonomi mengikut bidangan dan mengurangkan kos pengeluaran. Selaras dengan model H-O, Sabah yang mempunyai banyak sumber-sumber semula jadi seharusnya mempunyai eksport yang tinggi berikutan sumber-sumber semula jadi yang banyak seperti minyak, minyak sawit, kayu dan hasil laut. Bagaimanapun, sumbangan Sabah terhadap eksport negara masih rendah. Maka timbul persoalan, apakah faktor-faktor yang mempengaruhi eksport di Sabah. Kajian ini menggunakan data tahunan dari 1980 hingga 2010. Eksport di Sabah merupakan pemboleh ubah bersandar manakala pemboleh ubah tidak bersandar adalah keluaran dalam negara kasar (KDNK) di Sabah, pelaburan langsung asing (FDI) di Sabah, indeks harga pengeluar (PPI), perbelanjaan pembangunan di Sabah (DE) dan pertukaran mata wang (ER). Analisa dimulakan dengan anggaran Kaedah Kuasa Dua Terkecil (OLS). Bila nilai R^2 tinggi tetapi nilai Durbin Watson (DW) rendah, maka wujud masalah autokorelasi. Oleh sebab itu, analisis lanjut dibuat menggunakan ujian Augmented Dickey Fuller (ADF) untuk mengesahkan masalah unit root. Ujian Johansen Cointegration digunakan untuk menentukan hubungan jangka panjang di antara pemboleh ubah bersandar dan pemboleh ubah tidak bersandar serta bilangan vektor. Sementara Vector Error Correction Model (VECM) juga digunakan untuk menentukan hubungan jangka pendek di antara pemboleh ubah-pemboleh ubah tersebut. Keputusan analisis OLS, menunjukkan keluaran dalam negara kasar di Sabah, pelaburan langsung asing di Sabah, indeks harga pengeluar, perbelanjaan pembangunan di Sabah dan pertukaran mata wang adalah signifikan dalam mempengaruhi perubahan eksport di Sabah. Bagaimana pun, tiada hubungan jangka pendek di antara eksport dan keluaran dalam negara kasar di Sabah, pelaburan langsung asing di Sabah, indeks harga pengeluar, perbelanjaan pembangunan di Sabah dan pertukaran mata wang. Hasil kajian mendapati keluaran dalam negara kasar di Sabah, pelaburan langsung asing di Sabah adalah signifikan dan mempunyai hubungan positif dengan eksport di Sabah. Manakala, indeks harga pengeluar, perbelanjaan pembangunan di Sabah dan kadar pertukaran mata wang adalah juga signifikan tetapi tanda anggaran adalah tidak selaras dengan hipotesis kajian. Kenaikan di dalam indeks harga pengeluar dan kadar pertukaran mata wang mempunyai hubungan positif dengan eksport bukan negatif seperti yang sepatutnya, manakala perbelanjaan pembangunan pula mempunyai hubungan yang negatif dengan eksport berbanding dengan hubungan positif. Akhirnya, terdapat beberapa cadangan diberi untuk meningkatkan eksport di Sabah.

TABLE OF CONTENTS

		Page
TITLE		i
DECLARATION		ii
CERTIFICATION		iii
ACKNOWLEDGEMENT		iv
ABSTRACT		v
ABSTRACTS		vi
TABLE OF CONTENTS		vii
LIST OF TABLES		x
LIST OF CHART		xi
LIST OF APPENDIX		xii
LIST OF PAPER CUTTINGS		xiii
LIST OF ABBREVIATIONS		xiv
CHAPTER 1: INTRODUCTION		
1.1	Study Background	1
1.2	Problem Statement	6
1.3	Research Questions	7
1.4	Objective of the Study	7
1.5	Scope of the Study	7
1.6	Organization of the Study	9
CHAPTER 2: EXPORT OUTLOOK IN SABAH		
2.1	Introduction	10
2.2	Major Overseas Trading Partners and Products	11
2.3	Export Drivers in Sabah	12
	2.3.1 International Market	12
	2.3.2 Development of Industrial Estates	13
	2.3.3 Supportive Business Policies	14
	2.3.4 Development Expenditures	15
CHAPTER 3: LITERATURE REVIEW		
3.1	Introduction	17
3.2	Trade Theories	17
3.3	Factors that Influence Export	18
	a. Gross Domestic Product (GDP)	18
	b. Foreign Direct Investment (FDI)	19
	c. Cost of doing business	22

UMS
UNIVERSITI MALAYSIA SABAH

d. Development Expenditures 25
e. Exchange Rate 27
f. Political Factors 30
g. Other factors 32
3.4 Conclusion 33

CHAPTER 4: METHODOLOGY
4.1 Introduction 35
4.2 Source of Data 35
4.3 Research Framework 36
4.4 Model of the Study 37
4.5 Hypothesis of the Study 38
4.6 Definition of Variables 39
4.6.1 Dependent variable 39
(a) Export of Sabah 39
4.6.2 Independent variables 39
(a) Gross domestic product of Sabah (GDP) 39
(b) Foreign direct investments of Sabah (FDI) 40
(c) Producer price index (PPI) 40
(d) Development expenditures of Sabah (DE) 40
(e) Exchange Rate (ER) 40
4.7 Method of Analysis 41
4.7.1 t Test, Coefficient of Determination (R^2), F Test and Durbin Watson Statistics 41
4.7.2 Unit Root Test, Cointegration Test and Vector Error Correction Model (VECM) 42
4.7.3 Diagnostic Test 45

CHAPTER 5: ANALYSIS AND RESULTS
5.1 Introduction 46
5.2 Result 46
5.2.1 Ordinary Least Square (OLS) 46
5.2.2 Unit Root Test 47
5.2.3 Determination of the Optimal Lag Length 49
5.2.4 Cointegration Test 49
5.2.5 Vector Error Correction Model (VECM) 52
5.3 Result of Diagnostic Test 53
5.3.1 Correlation Test 53
5.3.2 Normality Test 53
5.3.3 Autocorrelation Test 54
5.3.4 Heteroskedasticity Test 55
5.4 Discussion 56

UMS
UNIVERSITI MALAYSIA SABAH

5.4.1 Ordinary Least Square (OLS) Results 56
5.4.2 Cointegration Test Result 57
5.4.3 Vector Error Correction (VECM) Result 62
5.5 Limitation of the Study 63

CHAPTER 6: CONCLUSION
6.1 Conclusion 64
6.2 Recommendations 65
6.2.1 Increase gross domestic product 65
6.2.2 Attract foreign direct investment 66
6.2.3 Reduce cost of doing business 66
6.2.4 Improvement of industrial infrastructures 67
6.2.5 Exchange rate 67
6.3 Future Study 67

REFERENCES 68
APPENDIXES AND PAPER CUTTING 72

UMS
UNIVERSITI MALAYSIA SABAH

LIST OF TABLES

Table 1.1	:	The Export Performance in Sabah	3
Table 1.2	:	The Sabah Gross Domestic Product	4
Table 1.3	:	The Total Approved Investment Figures in Sabah	4
Table 2.1	:	Sabah Export Performance	11
Table 2.2	:	Major Export Products	12
Table 2.3	:	The Sabah Main Industrial Estates	13
Table 2.4	:	Total Investment Targeted under the SDC Blueprint	16
Table 5.1	:	Ordinary Least Square Results	46
Table 5.2	:	The Augmented Dickey Fuller Test Result	48
Table 5.3	:	VAR (p) Model – Akaike Info Criterion (AIC) Result	49
Table 5.4		Cointegration Rank Test Result	49
Table 5.5	:	Normalized Cointegration Coefficients for the Model Ex = f (GDP, FDI, PPI, DE, ER)	50
Table 5.6	:	The Vector Error Correction Result	52
Table 5.7	:	Correlation Test Result	53
Table 5.8	:	Autocorrelation Test Result	54
Table 5.9	:	Heteroskedasticity Test Result	55
Table 5.10	:	Cost of Industrial Land	59
Table 5.11	:	Budget for Industrial parks development	61
Table 5.12	:	Development Expenditure of MID	61

UNIVERSITI MALAYSIA SABAH

LIST OF CHART

Chart 1.1	:	Major exporters	2
Chart 2.1	:	Sabah's Gross Domestic Product and Export	10
Chart 5.1	:	Normality Test Result	53

UMS
UNIVERSITI MALAYSIA SABAH

APPENDIXES

APPENDIX A: Eviews Result of Ordinary Least Square 72
APPENDIX B: Eviews Result of Unit Root Test 73
APPENDIX C: Eviews Result of Cointegration Test 80
APPENDIX D: Eviews Result of Vector Error Correction Estimates 86

UMS
UNIVERSITI MALAYSIA SABAH

PAPER CUTTING

- Do Away With Cabotage Policy or Have Full Liberalization: FSM
- FSM To KL: You Can Keep the Policy
- Mansuh Dasar Kabotaj
- Cost of Industrial Land in Sabah Step
- Impact Analysis on Liberalization from Cabotage Proposed
- Furniture Sector Sends S.O.S
- Shipping Costs Simply A Burden
- Sabah Still Nation's Main Producer of Palm Oil
- Timber Association Wants Equal Treatment
- Sabah Electricity to Impose 15% Increase from July 15
- Power Tariff Hike More Than 15% - DAP

UMS
UNIVERSITI MALAYSIA SABAH

ABBREVIATIONS

GDP	:	Gross Domestic Product
BNM	:	Bank Negara Malaysia
CPO	:	Crude Palm Oil
DDI	:	Domestic Direct Investment
DOS	:	Department of Statistics
EPU	:	Economic Planning Unit
EU	:	European Union
FAO	:	Food and Agriculture Organization
FDI	:	Foreign Direct Investment
FMEA	:	Failure Mode and Effect Analysis
FMM	:	Federation of Malaysian Manufacturers
FMT	:	Flexible Manufacturing Technology
FSM	:	Federation of Sabah Manufacturers
FTAs	:	Free Trade Agreements
GATT	:	General Agreement on Tariffs and Trade
ISO	:	International Organization for Standardization
IT	:	Information Technology
JBI	:	Jawatankuasa Bersama Industri
KKIP	:	Kota Kinablu Industrial Park
MID	:	Ministry of Industrial Development
MIDA	:	Malaysian Investment Development Authority
MNCs	:	Multinational Corporations
MNE	:	Multinational Enterprises
MOF	:	Ministry of Finance
MOT	:	Ministry of Transport
MPOB	:	Malaysian Palm Oil Board
OECD	:	Organization For Economic Cooperation and Development
POIC	:	Palm Oil Industrial Cluster
SESB	:	Sabah Electricity Sdn. Bhd.
SMEs	:	Small and Medium Enterprises

UMS
UNIVERSITI MALAYSIA SABAH

TFP	:	Total Factor Productivity
TFPG	:	Total Factor Productivity Growth
TNCs	:	Transitional Corporations
U.S.A	:	United States of America
UK	:	United Kingdom
WTO	:	World Trade Organization

UMS
UNIVERSITI MALAYSIA SABAH

CHAPTER 1

INTRODUCTION

1.1 Study Background

Trade is an important tool to foster economic development because it helps to increase export earnings, create job opportunities, improve standard of living and foster international relationship. There were many trade theories that highlighted factors to influence export. Adam Smith's Trade Model (1776) found that trade takes place if countries have absolute cost advantage in producing products. According to Ricardo (1817), every country will produce their commodities for the production of which it is most suited in terms of its natural endowments climate, quality of soil, means of transport, capital, etc. Furthermore, a country will produce these commodities in excess of its requirement and will exchange the surplus with the import of goods from other countries. Similarly the Heckscher–Ohlin Model (H–O model) (1933) on international trade highlighted a country will export products that use their abundant and cheap factors of production and import products that use the countries' scarce factors. This is because the profitability of goods determines the inputs cost. Goods that require inputs that are locally abundant will be cheaper to produce than those goods that require inputs that are locally scarce.

In Sabah there are various initiatives to boost export such as free trade agreements (FTAs), development of growth corridor, development of industrial parks, investment tax allowance, pioneer status and duty import exemption. In line with the supportive initiatives coupled with plenty of natural resources the state of Sabah should be technically the richest state in Malaysia thus supporting the Heckscher–Ohlin Model (H–O model) (1933) and Adam Smith's Trade Model (1776) that a country will export products that use their abundant and cheap factors of production and import products that use the countries' scarce factors. Although Sabah has abundant of natural resources such as timber, oil, palm oil and sea products, its contribution to the national export is still low and discouraging as

UNIVERSITI MALAYSIA SABAH

reported by the Department of Statistics Malaysia, Sabah (2011). No doubt when a country is rich in natural resources has an advantage of producing products using the natural resources and experiencing economics of scale but there are also other factors that need to be considered before trade can create a positive impact to its economy. Porter (1997, 1998, 2000) in his Porter's Diamond Theory claims that a country should have competitive advantage based on its location in order to create a competitive trade environment. The competitive advantage can come in the form of natural resources, advance resources, demand condition in the country, firm's structure, rivalry and the strategies.

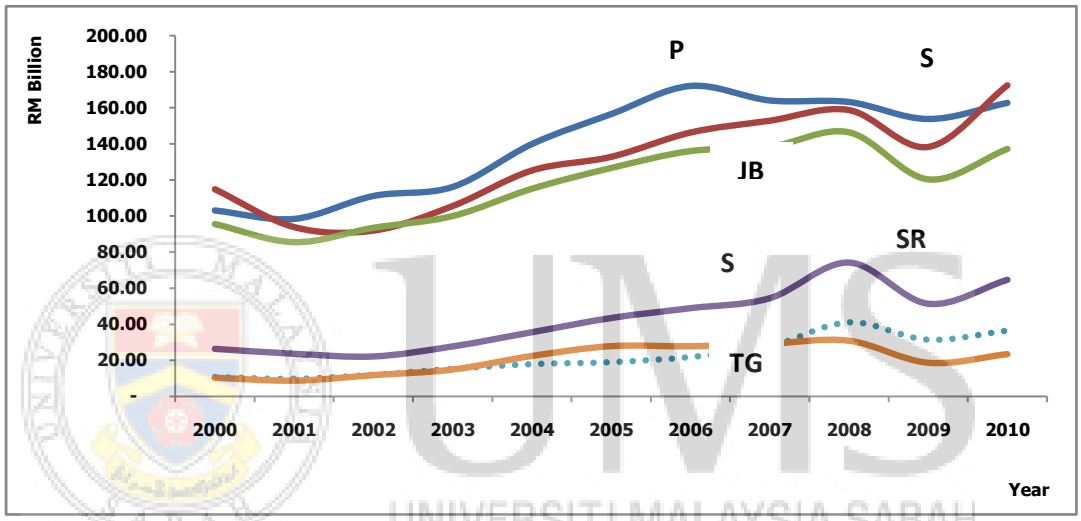

Chart 1.1: Major Exporters.

Source : Department of Statistics Malaysia, Sabah 2011

Chart 1.1 shows the Sabah export position among five major exporters in Malaysia. Sabah was ranked fifth among the major exporters in which its contribution to the total export of major exporters was below 6 percent from year 2000 to 2010. It was clearly that Sabah has not fully utilized its natural resources to boost export.

According to the Department of Statistics Malaysia, Sabah (2011), the performance of export was significantly driven by external demand. Its major export destinations are Japan, China, India, Korea and Netherlands. In addition, export of Sabah was substantially driven by resource based products such as crude

UNIVERSITI MALAYSIA SABAH

oil, palm oil and timber. In 2010, total export of Sabah was at RM43,613,741.00, of which 93.55 percent or RM40,798,733.00 was contributed by resource based products Although there are wide international markets under Malaysia free trade agreements but the export of Sabah is still discouraging. In 2010, Sabah has recorded an export growth of 17.20 percent to RM43.6 million, which only contributed 6.8 percent to the national export of RM638.8 million. Table 1.1 explains the export of Sabah against Malaysia's total export.

Table 1.1: The Export Performance in Sabah

Export (RM billion)	2005	2006	2007	2008	2009	2010
Sabah	23.9	27.0	33.6	48.1	37.2	43.6
National	536.2	589.2	604.3	663.0	552.5	638.8
% contribution	4.5	4.6	5.6	7.3	6.7	6.8

Source : Department of Statistics Malaysia, Sabah 2011

The gross domestic product of Sabah (GDP) is substantially underpinned by strong contribution of services and agriculture sector. These sectors have been contributing more than 65 percent to the state GDP. Table 1.2 shows that gross domestic product supply side from 2005 to 2010. In 2010, GDP expanded by 2.35 percent to RM31.567 million. The GDP growth for 2010 was underpinned by sturdy contribution of the services and agriculture sector, which contributed 50.35 percent or RM15.895 million and 22.93 percent or RM7.237 million, respectively.

UMS
UNIVERSITI MALAYSIA SABAH

Table 1.2: The Sabah Gross Domestic Product

	2005	2006	2007	2008	2009	2010
Sabah GDP- RM Mil	**25,285**	**26,647**	**27,844**	**29,712**	**30,841**	**31,567**
• Agriculture	7,433	7,654	8,029	7,800	7,565	7,237
• Mining	2,717	2,797	2,286	4,238	5,102	5,320
• Manufacturing	2,411	2,489	2,543	2,600	2,384	2,488
• Construction	537	583	422	420	441	458
• Services	12,113	13,041	14,445	14,497	15,193	15,895
Malaysia GDP - RM Mil	**449,250**	**475,526**	**504,919**	**530,683**	**522,001**	**559,554**
Cont. to the national GDP (%)	**5.6**	**5.6**	**5.5**	**5.6**	**5.9**	**5.6**
Cont. to the total export (%)	**4.5**	**4.6**	**5.6**	**7.3**	**6.7**	**6.8**

Source: Department of Statistics Malaysia, Sabah 2011

According to the Department of Statistics Malaysia 2011, Sabah's contribution to the national economy with regards to GDP and export were still unfavourable. In 2010, Sabah's contribution in terms of GDP and export was only 5.6 percent and 6.8 percent, respectively, as in Table 1.2. On average, Sabah was accounted for 5.9 percent of the national export from 2005 to 2010. According to the Federation of Sabah Manufacturers, FSM (2010) the small contribution of export was due to unfavourable foreign direct investment inflow arising from high cost of doing business in Sabah. The small contribution of Sabah's export creates challenges to the government to stimulate business activities, particularly on export oriented-industries.

Table 1.3: The Total Approved Investment Figures in Sabah

	2006	2007	2008	2009	2010	2011
DDI (RM million)	4,181.3	1,080.9	620.6	425.4	849.3	877.08
FDI (RM million)	812.5	2,176.7	343.8	5,238.9	476.3	44.34
TOTAL (RM billion)	4,993.8	3,257.6	964.4	5,664.3	1,325.6	921.42

Source: Malaysian Investment Development Authority, MIDA 2011

The total approved investment from 2006 to 2011 is shown in Table 1.3. It showed that domestic investors dominated the total approved investment. In 2011, domestic investment was accounted for 95.20 percent of the RM921.42 million total approved investment in Sabah. In view of potential and abundance of natural resources, Sabah needs substantial foreign direct investment inflow, particularly in strategic industries to boost export. This is in line with the study done by Kevin and Shunfeng (2000) that proved foreign-invested enterprises (FIEs) can help to increase export growth in China due to efficiency of FIEs in terms of marketing strategy, methods, procedures and channels of distribution.

Another issue is high cost of doing business in Sabah with regards to in consistent of power supply and high freight charges in Sabah. There are frequent power outrages due to incapability of the Sabah Electricity Sdn. Bhd. (SESB) to provide higher electricity supply arising from poor electricity infrastructures. The frequent disruptions caused the industries to bear extra costs for maintenance on damaged machineries, idle labour and failure to meet the production targets. Currently, industrial tariff for medium voltage peak/off-peak in Sabah is 28.60 sen/kWh and Peninsular Malaysia rate is 33.7 sen/kWh. However, minimum monthly charge for medium voltage of industrial electricity in Sabah is RM1,000.00 and Peninsular Malaysia is RM600.00 (source; Malaysian Investment Development Authority, MIDA 2013). In addition, cost of electricity installation in Sabah is higher than Peninsular Malaysia (source; Federation of Sabah Manufacturers, FSM 2010). Lack of gas supply has made Sabah unattractive for high technology investment such as solar and automotive industries. The Federation of Sabah Manufacturers, FSM (2010) claimed that high cost of doing business in Sabah were due to high freight charges arising from cabotage policy. Freight charges for exporting product abroad from Sabah are much higher than Peninsular. Freight charges to ship product from Sabah to Europe using 40' container is at RM10,260.00, whereas exporting the same size of container from Port Klang to Europe is only RM7,220.00. In addition, exporters are subject to other charges such as terminal handling charges, local container handling charges and barges charges arising from lack of port facilities. Recently, importers imposed an extra charge to storage empty container from port yard or importers premise to private depot due to new

UNIVERSITI MALAYSIA SABAH

regulation by the Sabah Port Authority to reduce number of empty container in port yard. The charges are RM148.00 for 20" container and RM260.00 for 40" container.

In addition, the State Economic Planning Unit, UPEN (2008) highlighted that development expenditures and exchange rate can also boost export of Sabah. The development expenditures includes development of industrial infrastructures such as industrial parks, road, water, electricity and internet seem to be significant in boosting business confidence for investment which ultimately lead to boost export performance. Proper industrial infrastructures are important to stimulate business activities. However, the development of industrial infrastructures in Sabah is still far behind compared to other states in Malaysia such as Penang, Johor and Selangor in terms of budget allocation from federal government (Source; Malaysian Investment Development Authority, MIDA (2011). Exchange rate stability is also viewed important to ensure Malaysian products are competitive and it is able to generate a steady flow of income from the international markets.

1.2 Problem Statement

Up to date studies have been carried out by previous researchers like Chandran and Munusamy (2009), Mahadevan (2001) and Rasiah (2003) on export competitiveness with regards to trade openness, investment, trade protection, political system, infrastructure and subsidy in the context of Malaysia using production function. Limited studies have included the supply side of export and a more focused study in Sabah that uses only the variables meant for the state of Sabah like gross domestic product (GDP) of Sabah, foreign direct investment of Sabah and development expenditures of Sabah.

Therefore the question arises whether focused independent variables like gross domestic product of Sabah, foreign direct investment of Sabah, producer price index, development expenditures of Sabah and exchange rate can influence exports of Sabah. In addition, it is also questionable whether the factors that influence exports of Sabah are the same in the short run and in the long run. Chandran and Munusamy (2009) highlighted that certain factors can only provide influence export in the short run but not in the long run. Thus the need to address

the short run and the long run on why the contribution of Sabah's export is not substantial should also be attended immediately. The findings of this study will be useful to complement state government economy transformation programmes to enhance Sabah's economy performance, particularly through external demand. The results of the study will serve as a guidance to attain economic prosperity through a competitive export. Moreover, the findings will also help to create more business opportunities in Sabah by identifying the factors that influence export of Sabah in the short run and long run. Most of the previous studies only concentrated on variables that represent the whole of Malaysia unlike this study that discovers the export performance only in Sabah. Mixture of data from both state (gross domestic product, foreign direct investment and development expenditures) and national data (producer price index and exchange rate) was used to identify factors that influence exports of Sabah.

1.3 Research Questions

The research questions that need to be addressed are as follows:

i. What are factors that influence exports of Sabah in the short run?
ii. What are factors that influence exports of Sabah in the long run?

UNIVERSITI MALAYSIA SABAH

1.4 Objective of the Study

The overall objective of the study would be to identify the factors that influence exports of Sabah. The specific objectives of the study are as follows:

a. To determine factors that influence exports of Sabah in the short run.
b. To determine factors that influence exports of Sabah in the long run.
c. Policy recommendations to boost exports of Sabah.

1.5 Scope of the Study

The study focuses on export of Sabah. Annual time series data from 1980 to 2010 was used to analyze the demand for export of Sabah. The dependent variable is Sabah's export value. The independent variables are gross domestic product of Sabah, foreign direct investment of Sabah, producer price index, development expenditures of Sabah and exchange rate. The study is also to identify factors that

influence exports of Sabah is same in the short run and the long run. Short run refers to activity within a year which is in line with the government annual budget and its impact to the national economy transformation agenda is insignificant. However, long run refers to activity for more than five years which is in line with the Malaysia Plan whereby target set in the economy agenda can be achieved by implementation of the activities.

Export of Sabah refers to goods which locally produced or manufactured for export or imported for subsequent re-export. Gross domestic product of Sabah refers to the total income generated within a year by the residents and non-residents in Sabah with regards to economic sector such as agriculture, mining and manufacturing. Foreign direct investment of Sabah refers to the investments made by the foreign companies in Sabah. Producer price index refers to the cost of doing business in Sabah. Producer price index is as a proxy to cost of doing business with regards to costs of labour, capital, technology, transportation and export subsidy. Development expenditures of Sabah refer to the public expenditures on industrial developments to support business activities such as development of industrial parks, research and development and technological advancement. Exchange rate refers to exchange rate between Malaysia Ringgit and the US dollar for trade settlements and exchange rate is commonly related to the relative price of goods.

UNIVERSITI MALAYSIA SABAH

The annual data from 1980 to 2010 was collected from relevant government agencies. Data on gross domestic product, export of Sabah, producer price index and development expenditures was sourced from the Department of Statistics Malaysia, Sabah (DOS). Meanwhile, data on foreign direct investment was taken from the Malaysian Investment Development Authority (MIDA). Meanwhile data on exchange rate was sourced from Bank Negara Malaysia (BNM). The study begins with the unit root test conducted on all variables. The test aims to determine the existence of unit root problem. The study was later extended to estimate the long run relationship between the dependent and independent variables using the Cointegration test and short run relationship using Vector Error Correction Model. Diagnostic test was carried out to investigate the robustness of the model.